

REMARKS

The foregoing Amendment and the following Remarks are submitted in response to the Office Action issued on December 6, 2004 in connection with the above-identified patent application, and are being filed within the three-month shortened statutory period set for a response by the Office Action.

Claims 1-16 remain pending in the present application. Claims 1, 7, 8, 9, 15, and 16 have been amended to emphasize that all actions recited therein are taken by a network access module (NAM) on the computing device with the computer application. Applicants respectfully submit that no new matter has been added to the application by the Amendment.

Applicants respectfully request reconsideration and withdrawal of the rejection of the claims, consistent with the following remarks.

The Examiner has rejected claims 1, 3-9, and 11-16 under 35 USC § 112, second paragraph. Applicants respectfully traverse the § 112 rejection of such claims.

According to the Examiner, the terms 'server' and 'cluster' as used in such claims is unclear. However, Applicants respectfully submit that such terms would be understood by one skilled in the relevant art, especially in the context of "a server 'server'" and "a cluster 'cluster'". In particular, one skilled in the relevant art would recognize that "a server 'server'" is intended to mean a server named 'server', and likewise that the "a cluster 'cluster'" is intended to mean a cluster named 'cluster'. Moreover, Applicants respectfully submit that one skilled in the art would also recognize the necessity of using such terms in the context of the present application, especially to distinguish from other servers not named 'server and other clusters not named 'cluster'. Accordingly, and inasmuch as one skilled in

the art would find such terms to be clear, Applicants respectfully request reconsideration and withdrawal of the § 112 rejection of the claims.

The Examiner has rejected claims 1-16 under 35 USC § 102(e) as being anticipated by Bruck et al. (U.S. Patent No. 6,801,949). Applicants respectfully traverse the § 102(e) rejection of such claims.

Independent claim 1 of the present application as amended recites a method of connecting a client application at a computing device by way of a network access module (NAM) at the computing device to a server 'server' on a cluster 'cluster' having a plurality of servers instantiated thereon, where the server is remote from the computing device. In the method, the NAM at the computing device receives 'cluster' and 'server' from the client application, sends a first request message to 'cluster' requesting first connection information for connecting to 'server', receives from 'cluster' a first reply message containing the requested first connection information, and connects the client application to 'server' on 'cluster' based on the received first connection information, wherein once connected, the client application and 'server' may transact business.

Thereafter, the NAM at the computing device determines that the connection to 'server' has failed, where 'server' presumably has been moved from a first server of the cluster to a second server of the cluster, and the received first connection information corresponds to the first server. Thus, the NAM at the computing device sends a second request message to 'cluster' requesting second connection information for connecting to 'server', where the requested second connection information corresponding to the second server, receives from 'cluster' a second reply message containing the requested second connection information, and connects the client application to 'server' on 'cluster' based on

the received second connection information, wherein once again connected, the client application and 'server' may again transact business.

Independent claim 9 recites subject matter similar to that recited in claim 1, albeit in the form of a computer-readable medium with computer-executable instructions thereon implementing the method.

As should be appreciated, and as set forth in the background section of the present application, server availability in a clustered system is oftentimes increased by allowing the clustered system to automatically switch processing for an instance of a server from a failed server to a working server. Thus, the working server takes the place of the failed server and restores database services to a client formerly accessing data from the failed server. A set of clients and clustered servers interconnected by a System Area Network (SAN) is an example of a clustered system that automatically switches processing from a failed server to a working server. A SAN is typically operated at high speed and is employed in situations where such high speed is required, such as in back-office-type scenarios. Such SAN may be accessed by a client by way of protocols built according to a high-speed architecture such as the Virtual Interface Architecture (VIA). However, the operating system of the SAN does not provide any support to enable VIA connectivity to clustered servers thereon, and does not provide any fail-over support to re-direct a request from the client from the failed server to the working server.

Accordingly, and as set forth in the specification of the present application, a client application 10 at a client 12 can connect over a network 13 to any one of multiple instantiated servers 14 on a SAN 16 by knowing (1) the name of the cluster 18 upon which the server 14 resides, and (2) the name of the instance of the server 14 that is to be connected

to. In particular, the client application 10 provides such information to a network access module (NAM) 20 on the client 12, and the NAM 20 employs such information to obtain mapping information from the SAN 16 that provides a physical network end-point for the instance of the server 14 on the cluster. Thus, the present invention is characterized by the NAM at the client resolving such mapping information, as opposed to some entity at the cluster.

The Bruck reference discloses a load balancing server system with a front server layer between a network (such as the Internet) and multiple back-end servers. The front layer machines comprise a server cluster that performs fail-over and dynamic load balancing for both server layers. The operation of the servers on both layers is monitored, and when a server failure at either layer is detected, the system automatically shifts network traffic from the failed machine to one or more operational machines, reconfiguring front-layer servers as needed without interrupting operation of the server system.

Thus, and in contrast to the present invention, the Bruck cluster is disclosed as performing mapping services for a client at a front end, and does not in fact disclose a NAM at the client that performs such mapping services, as is required by the claims of the present application. Put simply, then, the Bruck reference does not disclose any NAM at a computing device that assists in accessing a server in a cluster by performing the actions recited in claims 1 and 9. Instead, in the Bruck reference, such actions would be performed by the Bruck cluster itself. Again, the present invention is for situations where the cluster cannot itself perform such actions, such as for example a cluster system with a SAN operating according to the VIA architecture.

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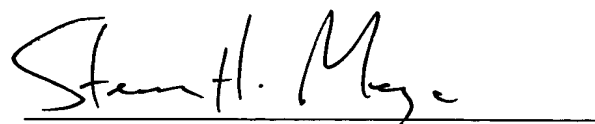
Applicants also note that dependent claims 4, 6, 12, and 14 require use of a VIA (Virtual Interface Architecture) protocol, and that the Examiner asserts use of such protocol is disclosed in the Bruck reference at column 7, lines 10-37, and column 8, lines 1-33). However, Applicants respectfully point out that such cited sections of the Bruck reference do not in fact disclose the use of such VIA protocol as recited in the claims.

As a result, and for all of the aforementioned reasons, Applicants respectfully submit that the Bruck reference does not disclose the subject matter recited in independent claims 1 or 9 or any claims depending therefrom, including claims 2-8 and 10-16. Accordingly, and for all the aforementioned reasons, Applicants respectfully submit that the Bruck reference cannot be applied to anticipate such claims. Thus, Applicants respectfully request reconsideration and withdrawal of the § 102(e) rejection.

In view of the foregoing discussion, Applicants respectfully submit that the present application, including claims 1-16, is in condition for allowance, and such action is respectfully requested.

Respectfully submitted,

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